

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|---|--|---|
| Applicant's or agent's file reference BCS03-2008 | FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below. | |
| International application No. PCT/EP2004/013049 | International filing date (day/month/year) 17/11/2004 | (Earliest) Priority Date (day/month/year) 17/11/2003 |
| Applicant COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH... | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2004/013049

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:

a. type of material

☒

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☒

in written format

☒

in computer readable form

c. time of filing/furnishing

☒

contained in the international application as filed

☒

filed together with the international application in computer readable form

☐

furnished subsequently to this Authority for the purpose of search

2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/013049

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/82 C07K14/435 C12N15/11 C12N15/63

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, Sequence Search, WPI Data, PAJ, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | WO 01/37654 A (DNA PLANT TECHNOLOGY CORPORATION; TOBIAS, CHRISTIAN; SHAH, GOWRI; GUTT) 31 May 2001 (2001-05-31) cited in the application | 1,6,7,9, 10,13-21 |
| Y | page 2, line 33 - page 4, line 32 page 7, line 17 - line 33 page 8, line 15 - page 10, line 15 page 22, line 17 - line 19; claims 6,32; example 8 | 2-5,8, 11,12 |
| X | ----- DATABASE EMBL M.persicae ecdysone receptor 11 October 1999 (1999-10-11), XP002317945 retrieved from EBI Database accession no. AAX90669 abstract -/-- | 22 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

17 February 2005

Date of mailing of the international search report

09/03/2005

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/013049

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| | & WO 99/36520 A (COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION; HILL, RO) 22 July 1999 (1999-07-22) ----- | |
| Y | CA 2 094 658 A1 (ALLELIX BIOPHARMACEUTICALS INC) 24 October 1993 (1993-10-24) abstract; claims 1-3,7-9 ----- | 23-26 |
| Y | WO 00/01846 A (DEVGEN N.V; PLAETINCK, GEERT; PLATTEEUW, CHRIST; MORTIER, KATHERINE; B) 13 January 2000 (2000-01-13) cited in the application page 7, line 11 - line 31 page 29, line 1 - line 34; claims 3,54 ----- | 1-21 |
| Y | WO 03/004644 A (COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION; WHYARD,) 16 January 2003 (2003-01-16) cited in the application page 4, line 1 - page 5, line 6 page 6, line 1 - page 7, line 18 page 20, line 15 - page 21, line 5 page 23, line 21 - page 24, line 31 page 37, line 1 - line 21; claims 4,35 ----- | 1-26 |
| Y | WO 03/076619 A (COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION) 18 September 2003 (2003-09-18) abstract page 8, line 27 - line 23 page 32, line 17 - page 33, line 5 page 34, line 1 - line 17 page 36, line 31 - page 37, line 24 ----- | 1-26 |
| Y | WO 01/34815 A (CAMBRIA BIOSCIENCES, LLC) 17 May 2001 (2001-05-17) abstract page 21, paragraph 1 ----- | 1-21 |
| A | TIMMONS L ET AL: "Specific interference by ingested dsRNA" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 395, no. 6705, 29 October 1998 (1998-10-29), page 854, XP002103601 ISSN: 0028-0836 the whole document ----- | 1-26 |
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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/013049

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| A | <p>FIRE A: "RNA-triggered gene silencing" TRENDS IN GENETICS, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 15, no. 9, 1 September 1999 (1999-09-01), pages 358-363, XP004176656 ISSN: 0168-9525</p> <p>-----</p> | |
| A | <p>MONTGOMERY M K ET AL: "Double-stranded RNA as a mediator in sequence-specific genetic silencing and co-suppression" TRENDS IN GENETICS, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 14, no. 7, July 1998 (1998-07), pages 255-258, XP004124680 ISSN: 0168-9525</p> <p>-----</p> | |
| A | <p>MANOHARAN M: "Oligonucleotide conjugates as potential antisense drugs with improved uptake, biodistribution, targeted delivery, and mechanism of action" ANTISENSE & NUCLEIC ACID DRUG DEVELOPMENT, MARY ANN LIEBERT, INC., NEW YORK, US, vol. 12, 2002, pages 103-128, XP002294027 ISSN: 1087-2906</p> <p>-----</p> | |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/013049

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
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| WO 0137654 | A | 31-05-2001 | AU 2047001 A WO 0137654 A2 | 04-06-2001 31-05-2001 |
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| CA 2094658 | A1 | 24-10-1993 | NONE | |
| WO 0001846 | A | 13-01-2000 | AU 769223 B2 AU 4907999 A BR 9911802 A CA 2332619 A1 CN 1323354 T DE 29924298 U1 DE 29924299 U1 DE 1093526 T1 WO 0001846 A2 EP 1197567 A2 EP 1484415 A2 EP 1093526 A2 GB 2349885 A ,B GB 2362885 A ,B GB 2370275 A ,B HK 1029142 A1 HU 0103571 A2 JP 2002519072 T MX PA00012955 A NO 20010019 A NZ 509182 A PL 347978 A1 US 2003061626 A1 US 2004133943 A1 US 2004187170 A1 ZA 200007653 A | 22-01-2004 24-01-2000 22-01-2002 13-01-2000 21-11-2001 12-09-2002 12-09-2002 11-10-2001 13-01-2000 17-04-2002 08-12-2004 25-04-2001 15-11-2000 05-12-2001 26-06-2002 25-04-2003 28-01-2002 02-07-2002 10-04-2002 05-03-2001 30-01-2004 06-05-2002 27-03-2003 08-07-2004 23-09-2004 19-09-2002 |
| WO 03004644 | A | 16-01-2003 | WO 03004644 A1 CA 2455490 A1 EP 1414959 A1 JP 2004532653 T | 16-01-2003 16-01-2003 06-05-2004 28-10-2004 |
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| WO 0134815 | A | 17-05-2001 | US 6326193 B1 AU 1461701 A CA 2388753 A1 EP 1230376 A1 WO 0134815 A1 US 2002137710 A1 | 04-12-2001 06-06-2001 17-05-2001 14-08-2002 17-05-2001 26-09-2002 |